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[Continued on next page]

(54) Title: CHIMAERIC PLANT VIRUSES WITH MUCIN PEPTIDES

(a)

Sequence of SBMV Coat Protein Spanning The Potential Insertion Site With Introduced Base Changes and New Restriction Sites: (sequence starts at nt 3955)

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M E G G S S K T A V N T G
ATGGAAGGAGGATCATCTAAGACTGCTGTGAACACTGGG
      ↓           ↓
GGATCC      GTTAAC
BamHI       HpaI

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(57) Abstract: Mucin peptide epitopes are inserted into the coat protein of a plant virus (e.g. a comovirus such as CPMV) having a beta-barrel structure at an immunogenically effective site, such as in a loop connecting beta sheets or at/near the C-terminus. The resulting chimaeric virus particles are extremely immunogenic, giving better results than KLH conjugation and not requiring the addition of exogenous adjuvant. They are effective at mucosal surfaces, particularly when administered intranasally.

(b)

Series of Sequences to be Inserted Between the Restriction Sites to Insert the MUC1(16) Epitope at Various Locations

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G V T S A P D T R P A P G S T A
GGTGTACTTCTGCTCCTGATACTAGACCTGCTCCTGGTTCTAGCT
CCACAAATGAAGACGACCACTATGATCTGGACGAGGACCAAGATGACGA
      ↑           ↓
      GATCC      TCTAAGACTGCTGTT
      G           AGATTCTGACGACAA
      GATCCTCT  AAGACTGCTGTT
      GAGA      TTCTGACGACAA
      GATCCTCTAAG  ACTGCTGTT
      GAGATTCTGA  TGACGACAA
      GATCCTCTAAGACT  GCTGTT
      GAGATTCTGA  CGACAA
      GATCCTCTAAGACTGCT  GTT
      GAGATTCTGACGA  CAA

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WO 01/18199 A1



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